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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/728,866 | 12/08/2003 | Takeshi Makiyama | 1152-0295P | 1179 |

2292 7590 02/24/2006

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EXAMINER

SHERALI, ISHRAT I

ART UNIT PAPER NUMBER

2621

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,866

Applicant(s)

MAKIYAMA ET AL.

Examiner

Sherali Ishrat

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. 09407,880.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/07/2005 has been entered.

Applicant's arguments are fully considered however they moot due to new grounds of rejection which necessitated due amendment to the claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24-33 are rejected under 35 USC § 103 (a) as being unpatentable over Wu et al. (US 5,376,968) in view Asai et al. (US 5,111,294).

Regarding claim 24 Wu discloses image coding apparatus (Fig. 1, shows image coding apparatus, Transform, Quantize and Encode) comprising:

a motion compensation (Wu, Fig 1, col. 8, lines 24-25, Wu states "compression mode using motion compensation" which corresponds to motion compensation means);

a transformer (Wu, Fig 1, blocks 12, 26 and 44 col. 27-28, Wu shows transforming means);

a quantizing (Wu, Fig 1, blocks 12, 26 and 44 col. 27-28, Wu shows transforming and quantizing means);

an inverse quantizing (Wu, Fig 2, block 84 shows inverse quantizing means and col. 12, lines 36-45, figure 5 decompression, inverse quantizing and inverse transform process luminance data, and figure 4 process chrominance data and shows inverse quantize DPCM CHROM/PCM CHROM i.e plural inverse quantizing tools);

an inversing transformer (Wu, Fig 2, block 86 shows inverse transforming means);

image data coding apparatus transmits information indicating tools constituting a decoding algorithm for decoding image data (Fig. 4 and 5 shows image coding apparatus transmitting tools for decoding algorithm such as Decompression [204] , Decompression [194] and Quantized DPCM CHROM/ PCM CHROM);

Wu has not explicitly disclosed two different quantizing tools and two different inverse quantizing tools.

In the same field of endeavor of video image encoding/decoding and motion compensation, Asai discloses two different quantizing tools and two different inverse quantizing tools (Asai, FIG.8, col. 7, lines 63-67, Asai shows plurality of quantizing tools [quantizers] which are selected based on the size of movement vector of the input

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signal and sequence transformed coefficients and FIG. 10, col. 8, lines 40-45, Asai show plural inverse quantizing tools which are selected based on the size of movement vector of the input signal and sequence of transformed coefficients).

Therefore it would have been obvious to one having ordinary skill in the art at the invention to use plurality of quantizing and inverse quantizing tools as shown by Asai in the system of Wu because such an apparatus prevent overflow of the buffer therefore it is not essential to have large buffer as stated by Asai in col. 7, lines 50-55.

Regarding claim 25 Asai discloses first quantizing tool having a first processing capability and second tool have second processing capability different than first (Asai, FIG.8, col. 7, lines 63-67, Asai shows plurality of quantizing tools [quantizers] which are selected based on the size of movement vector of the input signal and sequence transformed coefficients and FIG. 10, col. 8, lines 40-45, Asai show plural inverse quantizing tools which are selected based on the size of movement vector of the input signal and sequence of transformed coefficients. Asai quantizing tools are selected based on the size of the movement vector of the input signal i.e. different quantizer have different capability of processing based on the size of movement vector).

Regarding claim 26, Wu discloses information indicating an inverse quantizing tools comprise information identifying a quantizing tool (Wu, FIG 2. shows identifying quantizing PCM, DPCM GENERAL, DPCM SPECIFIC).

Asai discloses information indicating an inverse quantizing tools comprise information identifying a quantizing tool (Asai in FIG. 10, col. 8, lines 39-45, and lines

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50-55, Asai shows information indicating an inverse quantizing tools comprise information identifying a quantizing tool).

Regarding claim 27, Asai discloses information indicating processing capability of a quantizing tool (Asai in col. 8, lines 50-55, In the inverse quantizing section as shown in FIG. 9, according to the sequence of transformed coefficients and the size of movement vector a proper quantizing characteristic is selected and inverse quantization is performed i.e. information indicating processing capability of quantizing/inverse tool which is based the size of the movement vector of the input signal).

Regarding claim 28 Wu discloses information indicating tool comprises information specifying first inverse or second inverse quantizing tool (Wu discloses in FIG 2 shows switch quantizing tool which corresponds to first quantizing/inverse or second tool quantizing/inverse).

Regarding claim 29 Wu discloses image decoding apparatus (Figs. 1 and 2, shows image decoding apparatus, inverse Transform, and inverse quantizer comprising:

a motion compensation (Wu, Fig 1, col. 8, lines 24-25, Wu states "compression mode using motion compensation" which corresponds to motion compensation means);

an inverse quantizing (Wu, Fig 2, block 84 shows inverse quantizing means);

an inversing transform (Wu, Fig 2, block 86 shows inverse transforming means);

an inverse quantizing (Wu, Fig 2, block 84 shows inverse quantizing means and col. 12, lines 36-45, figure 5 decompression, inverse quantizing and inverse transform process luminance data, and figure 4 process chrominance data and shows inverse quantize DPCM CHROM/PCM CHROM i.e. plural inverse quantizing tools).

image data decoding apparatus receives information indicating tools constituting a decoding algorithm for decoding image data (Fig. 4 and 5 shows image decoding apparatus receiving tools for decoding algorithm such as Decompression [204] , Decompression [194] , Quantized DPCM CHROM/ PCM CHROM and to inverse quantizing DPCM or PCM);

Wu has not explicitly disclosed two different quantizing tools and two different inverse quantizing tools.

In the same field of endeavor of video image encoding/decoding and motion compensation, Asai discloses two different quantizing tools and two different inverse quantizing tools (Asai, FIG.8, col. 7, lines 63-67, Asai shows plurality of quantizing tools [quantizers] which are selected based on the size of movement vector of the input signal and sequence transformed coefficients and FIG. 10, col. 8, lines 40-45, Asai show plural inverse quantizing tools which are selected based on the size of movement vector of the input signal and sequence of transformed coefficients).

Therefore it would have been obvious to one having ordinary skill in the art at the invention to use plurality of quantizing and inverse quantizing tools as shown by Asai in the system of Wu because such an apparatus prevent overflow of the buffer therefore it is not essential to have large buffer as stated by Asai in col. 7, lines 50-55.

Regarding claim 30 Asai discloses first quantizing tool having a first processing capability and second tool have second processing capability different than first (Asai, FIG.8, col. 7, lines 63-67, Asai shows plurality of inverse quantizing tools [quantizers] which are selected based on the size of movement vector of the input signal and sequence transformed coefficients and FIG. 10, col. 8, lines 40-45, Asai show plural inverse quantizing tools which are selected based on the size of movement vector of the input signal and sequence of transformed coefficients. Asai inverse quantizing tools are selected based on the size of the movement vector of the input signal i.e. different inverse quantizer have different capability of processing based on the size of movement vector).

Regarding claim 31, Wu discloses information indicating an inverse quantizing tools comprise information identifying a quantizing tool (Wu, FIG 2. shows identifying quantizing PCM, DPCM GENERAL, DPCM SPECIFIC).

Asai discloses information indicating an inverse quantizing tools comprise information identifying a quantizing tool (Asai in FIG. 10, col. 8, lines 39-45, and lines 50-55, Asai shows information indicating an inverse quantizing tools comprise information identifying a quantizing tool).

Regarding claim 32, Asai discloses information indicating processing capability of a quantizing tool (Asai in col. 8, lines 50-55, In the inverse quantizing section as shown in FIG. 9, according to the sequence of transformed coefficients and the size of movement vector a proper quantizing characteristic is selected and inverse quantization

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is performed i.e. information indicating processing capability of quantizing/inverse quantizing tool which is based the size of the movement vector of the input signal).

Regarding claim 33 Wu discloses information indicating tool comprises information specifying first inverse or second inverse quantizing tool (Wu discloses in FIG 2 shows switch quantizing tool which corresponds to first quantizing/inverse or second tool quantizing/inverse).

Communication

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sherali Ishrat whose telephone number is 571-272-7398. The examiner can normally be reached on 8:00 AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

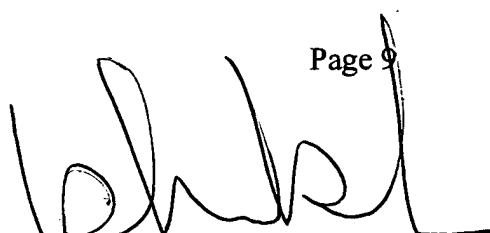
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Ishrat Sherali

February 15, 2006



**ISHRAT SHERALI
PATENT EXAMINER
AUGUST 2021**